

REMARKS

Examination of the application in view of the present amendment and following remarks is respectfully requested.

By the present amendment, claim 1 has been amended, claims 15-26 have been added. Claims 11, 12 have been cancelled. Claims 1-10 and 13-26 are currently pending in the application.

Claim 1 defines over the prior art. None of the prior art discloses a vehicle steering column according to claim 1. None of the cited prior art patents, either alone or in combination, disclose a vehicle steering column with a housing having axially adjacent annular ribs and portions of the resilient material of the gasket interdigitated with the axially adjacent annular ribs comprising means for preventing the gasket from walk out from the housing.

Claims 2-10 and 13-15 depend from claim 1 and define over the prior art for the same reasons as claim 1 and for the specific limitations recited therein.

Claims 2-8 and 13-14 claim specific range of measurements of the ribs including the widths, heights, and lengths of the valleys and peaks is critical to the performance of the invention. A declaration from the inventor under 37 CFR 1.132 is being submitted along with this amendment in support of the of criticality of the measurements of the ribs. Establishment of criticality is evidence against the determination of obviousness.

Regarding claim 15, none of the cited prior art, either alone or in combination, disclose or suggest a lower steering column member connected to the input shaft via a universal joint, the lower steering column member being for connecting to steerable wheels of a vehicle; and the housing including a flange portion for connecting to the lower steering column member, the input shaft tilting relative to the lower steering column member via the housing about another axis upon tilting the steering wheel and including all the limitations of claim 1. Thus, claim 15 should be allowed.

Claim 16 defines over the cited prior art. Regarding the cited prior art patent to Cartwright et al. (US 5,678,454), the bearings 34 are only schematically shown and they are not axially spaced apart along the steering shaft by a section of the housing which encircles the steering shaft.

Regarding the cited prior art patent to Tanoue (US 4,608,881), only one bearing is shown. In addition, the housing is not shown to have two cavities with two bearings inside the cavities.

Regarding the cited prior art patent to Pfenninger, Jr., et al. (US 2,674,505), the bearings 13 are not shown inside a housing with first and second axially spaced apart ring shaped cavities that extend radially into the inner surface of the cylindrical portion of the housing, the first and second ring shaped cavities that are spaced apart by a ring shaped projection of the cylindrical portion of the housing and first and second bearings interposed between the housing and the input shaft in the first and second cavities, respectively and

supporting the input shaft for rotation about the axis. In addition, Pfenninger, Jr., et al. does not disclose first and second gaskets made of resilient material placed into each of the first and second cavities and does not show that the two cavities have ribs interdigitated with ribs on the two gaskets and that the axially adjacent annular ribs and the portions of the resilient material of each gasket interdigitated with the axially adjacent annular ribs comprising means for preventing the first and second gaskets from walk out from the first and second cavities.

Regarding the cited prior art patent to Kidzun et al. (US 5,632,562), the housing does not include first and second axially spaced apart ring shaped cavities that extend radially into the inner surface of the cylindrical portion of the housing, the first and second ring shaped cavities being spaced apart by a ring shaped projection of said cylindrical portion of the housing; and does not disclose first and second bearings interposed between the housing and the input shaft in the first and second cavities, respectively and supporting the input shaft for rotation about the axis. In addition, Kidzun et al. does not disclose that the two cavities of the housing include ribs interdigitated with ribs on the two gaskets and does not disclose that these comprise means for preventing the first and second gaskets from walk out from the first and second cavities. Thus, claim 16 should be allowed.

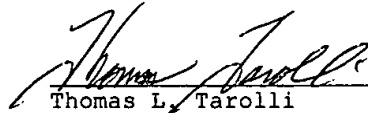
Claims 17-25 are identical to claims 2-10, 13 and 14. Claims 17-25 include further limitations to an allowable claim. Claims 17-25 should be allowed.

Serial No. 09/684,729

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,


Thomas L. Tarolli
Reg. No. 20,177
Customer No. 26, 294

TAROLLI, SUNDHEIM, COVELL,
& TUMMINO L.L.P.
1111 Leader Building
526 Superior Avenue
Cleveland, Ohio 44114-1400
Phone: (216) 621-2234
Fax: (216) 621-4072

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Twice Amended) A vehicle steering column comprising:

an axially extending input shaft for connecting to a vehicle steering wheel, the input shaft being rotatable about an axis upon rotation of the steering wheel;

a housing at least partially enclosing the input shaft;

a bearing interposed between the housing and the input shaft and supporting the input shaft for rotation about the axis, the bearing having an inner race engaging the input shaft and an outer race;

the housing having at least one series of axially spaced, annular ribs that at least partially extend around the axis of the input shaft and around the outer race of the bearing, axially adjacent annular ribs being separated by an annular groove; and

a gasket made of resilient material interposed between the outer race of the bearing and the ribs, the gasket comprising a tubular member encircling the outer race of the bearing, the gasket having a cylindrical inner surface and an outer surface, the inner surface engaging the outer race of the bearing, and the outer surface engaging the ribs, the gasket having portions interdigitated with the ribs to resist relative axial movement between the gasket and the housing,

Serial No. 09/684,729

said axially adjacent annular ribs and said portions
of the resilient material of said gasket interdigitated with
said axially adjacent annular ribs comprising means for
preventing said gasket from walk out from said housing.